

METHOD FOR REDUCING BACKGROUND CLUTTER IN A CAMERA IMAGE

TECHNOLOGY READINESS LEVEL: 5

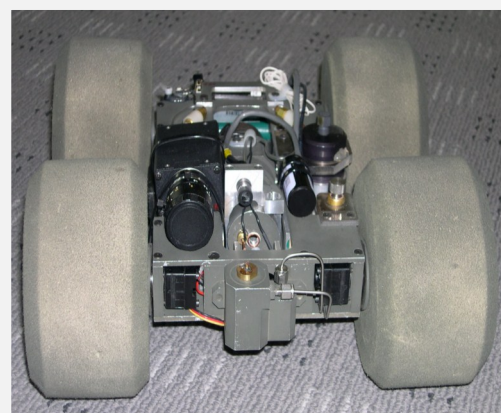
US PATENT # 7,742,640

KEY ELEMENTS OF THE TECHNOLOGY HAVE BEEN DEMONSTRATED IN RELEVANT ENVIRONMENTS.

TECHNOLOGY SUMMARY

Sandia has developed an eye-safe, robust, lightweight, and low-cost 3D structured lighting sensor for use in broad daylight outdoor applications. This newly developed sensor overcomes the current limitations of laser-based 3D sensors and can help with threat assessment for first responders, crime scene investigation, and any other scenario which requires accurate 3D mapping.

Currently available laser scanners are slow, bulky and heavy, expensive, fragile, short-range, sensitive to vibration, and unreliable for outdoor use in bright sunlight conditions. The technology developed by Sandia overcomes these limitations and contributes to the realization of intelligent machine systems reducing manpower.



Structured lighting concept demonstrated on a robotic vehicle.

POTENTIAL APPLICATIONS

- Outdoor 3D Mapping
- First Responder Threat Assessment
- Crime Scene Investigation
- Surveillance and Reconnaissance
- Part Inspection
- Damage Assessment
- Construction and Maintenance

TECHNOLOGICAL BENEFITS

- Eye-safe, robust, low cost, and lightweight
- Vast overall improvement on existing 3D mapping technology
- Unlike currently available technology, this sensor is eye-safe
- Overcomes the limitations of current laser-based 3D sensors

TECHNOLOGY INQUIRY?

For more information or licensing opportunities contact us at
ip@sandia.gov
Refer to SD # 10018

or visit
<https://ip.sandia.gov>